DOCUMENT RESUME

ED 397 098 TM 025 166

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TITLE An Investigation into the Test Reliability of the Pupil Control Ideology Form.
PUB DATE 8 Mar 96
NOTE 16p.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Construct Validity; Cross Cultural Studies; *Discipline; *Educational Environment; Educational Research; Elementary Secondary Education; Humanistic Education; *Ideology; *Teacher Attitudes; *Test Reliability; Test Use
IDENTIFIERS Alpha Coefficient; *Control (Social Behavior); Custodial Approach; Preservice Teachers; *Pupil Control Ideology Form; Self Report Measures; Split Half Test Reliability; Test Retest Reliability

ABSTRACT

The Pupil Control Ideology Form (PCI) is one of the major instruments used by researchers interested in the study of school climate. Pupil control is a central feature of the organizational life of schools, and each school appears to have a prevailing ideology of pupil control. The PCI is a self-report instrument used to measure an educator's orientation toward pupil control along a bipolar custodial-humanistic continuum. Various studies have reported on the test reliability of the PCI using test-retest, split-half, and Cronbach's alpha techniques. Evidence of the construct validity of the PCI has been provided by comparing teachers' PCI responses to their principals' judgments of their orientations and by comparing responses of teachers from schools known to be highly custodial with responses from humanistic schools. Studies have supported the internal consistency of the instrument with preservice teachers, and other studies have supported its reliability with elementary and secondary school teachers in the classroom. Evidence supports the adequacy of the instrument for use in research on teacher ideology. Recommendations are made for enhancing the reliability of the PCI with cross-cultural groups and for additional study with other teacher populations. (Contains 38 references.) (SLD)

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An Investigation Into The Test Reliability Of The Pupil Control Ideology Form

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March 8, 1996

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Introduction

Waller (1932) views the school as a small society in which the characteristic mode of social interaction centers around teaching and learning and such interaction determines the political organization of the school. Furthermore, the organization of the school is one which emphasizes the subordination of students and the dominance of teachers. His analysis of the social organization of the school indicates the importance and centrality of pupil control within both the structural and normative aspects of school culture.

Willower and Jones (1963) point out that although many factors influence the culture and tone of a school, pupil control is a dominant motiff. In fact, pupil control is seen as an "integrative theme" of the social system of the school. Silberman (1970), after an extensive study of public schools in the United States, concluded that the most important general characteristic of schools was a preoccupation with order and control. Licata and Willower (1975) state that schools are organizations in which students must submit to an authority structure and adjust to a relatively rigid routine. Rosenholtz (1989) contends that for the teacher control of students is often so pronounced that the goal of classroom order often displaces student learning as the definition of teaching effectiveness. Denscombe (1985) argues that teachers live in a world where classroom control is deemed vital to their occupational survival.

Willower, Eidell, and Hoy (1967) regard the public school as a social system and concern with pupil control as one salient feature of school culture. Pupil control is seen as taking on a central part in the organizational life of schools and acting as a thread running through the fabric of a school's way of life. Pupil control problems are viewed as playing a major part in teacher-teacher and teacher-administrator relationships. Moreover, each school appears to have a prevailing ideology regarding pupil control which has an influence on the values of its various members (Lunenburg and O'Reilly, 1974).

According to Anderson (1982), the Pupil Control Ideology Form (hereafter called the PCI Form) is one of the major instruments used by researchers interested in the study of school climate and represents a unique thread within such research, possessing both anthropological and psychological roots. Graham, Benson, and Henry

(1985) point out that the PCI Form has played an important role in the study of human behavior in schools.

The PCI Form has been used in an extensive number of studies, involving preservice teachers, inservice teachers, counselors and principals, encompassing a myriad of variables, such as organizational and instructional climate, student sense of alienation, teacher efficacy, democratic classroom governance, teacher self-acceptance and acceptance of others, student self-actualization, classroom verbal behavior and interaction, teacher disciplinary referral behavior, creativity, dogmatism, value orientation, teacher self-concept, organizational socialization, amount of engaged instructional activities, teacher personality, student brinkmanship, student self-concept as a learner, teacher stress, classroom environmental robustness, quality of school life, teacher job satisfaction, pupil control behavior, students' projected feelings toward teachers, faculty ideological agreement, open education, teachers' perceptions of student threat to teacher status, student attitudes toward school, teacher belief systems, pluralistic ignorance, status obeisance, innovation and change, teacher expectancy motivation, locus of control, teacher burnout, attitudes toward student rights, teacher reactions to pupil disruptive behavior, and professional orientation. Moreover, the PCI Form has been employed in a number of international/cross-cultural studies involving, for example, the Caribbean, Sudan, Canada, Australia, and Israel.

A major purpose of this investigation is to examine various studies that report on the test reliability of the PCI Form using test-retest, split-half, and Cronbach's alpha techniques with both preservice and inservice educators. Following a comprehensive review of predominantly periodical literature, the authors noted that it was quite common for researchers to mention the original test reliability scores for the PCI Form derived at by Willower, Eidell, and Hoy (1967). However, it was far less common to also report this instrument's test reliability scores for samples utilized in various studies on pupil control ideology. In the authors' review of mainly periodical literature covering 1963-1995, 33% (5 out of 15) of the studies dealing with preservice teachers and 11% (5 out of 46) of the studies dealing with inservice educators reported test reliability scores on the PCI Form for their particular samples. Yet it is presently argued that it is important to know for investigative

purposes whether the PCI Form is a reliable measure over time with different samples of subjects in different situations studied for different reasons.

To underscore this point, Mason and Bramble (1989) state that when an established test is used in research, the application, setting, or purpose might change the test, resulting in a need for studying the reliability and validity within the context of the research. They also argue that even in situations where an instrument is being utilized in the manner in which it was designed, problems with reliability and validity may arise. Sprinthall (1994) warns us to always keep firmly in mind that reliability refers to a certain measuring instrument applied to a certain population under certain conditions. Finally, Vockell and Asher (1995) contend that any measurement device that is reliable in one setting or for one purpose may be unreliable in another setting or for a different purpose. They add that establishing that our data collection processes are reliable is an important step in the process of public, scientific thinking.

The Pupil Control Ideology Form

The PCI Form, using a summated rating scale, is a self-report instrument developed by Willower, Eidell, and Hoy (1967). It consists of 20 five-point Likert-type declarative statements, representing various facets of school life, used to measure an educator's orientation toward pupil control along a bipolar custodial-humanistic continuum. Responses on this paper-and-pencil instrument are scored from 5 points (strongly agree) to 1 point (strongly disagree), with scoring reversed on the only two items positive to the humanistic viewpoint. The theoretical scoring range on this measure is from 20 to 100. The higher the overall score is then the more custodial the pupil control ideology, while the lower the overall score is then the more humanistic the pupil control orientation. The PCI Form is regarded as a relatively simple, nonthreatening, and easy-to-administer instrument (Foley and Brooks, 1978). Administration time for the PCI Form has been reported to be approximately 15 minutes in length (Harty and Hassan, 1983).

Examples of items found on the PCI Form include: "A few pupils are just young hoodlums and should be treated accordingly"; "It is often necessary to remind pupils that their status in school differs

from that of teachers"; and "Pupils can be trusted to work together without supervision" (score reversed). Factor analytic procedures, employed by Graham, Halpin, Harris, and Benson (1985) with a sample of undergraduate and graduate education students and by Graham, Benson, and Henry (1985) with a sample of primary and intermediate level teachers, revealed a unidimensional scale with one total score, thus attesting to the PCI Form's construct validity.

Based upon an adaptation to public schools of a typology employed by Gilbert and Levinson (1957) in their study of the control ideology of mental hospital staff members concerning patients, Willower, Eidell, and Hoy (1967) developed prototypes of custodial and humanistic orientations toward pupil control as measured by the PCI Form. Control ideology is conceptualized as a bipolar continuum ranging from "custodialism" at one extreme to "humanism" at the other extreme. These ideological extremes constitute analytic abstractions or "ideal types" in the sense that Max Weber used the term, i.e., they represent pure types not necessarily found in such form within experience. Thus an individual's pupil control orientation may fall anywhere between these two extremes. The concepts of humanistic and custodial pupil control ideologies are used to contrast types of educators' individual orientations and the types of school organizations that they seek to rationalize and justify. A description of each prototype, based on Willower, Eidell, and Hoy (1967), is thus presented.

The prototype of the custodial orientation is the rigidly traditional school. A highly controlled setting concerned primarily with the maintenance of order is provided by this type of organization. Students tend to be stereotyped in terms of their appearance, behavior, and parents' social status, and they are perceived as irresponsible and undisciplined persons who must be controlled through punitive sanctions. In this type of school teachers do not attempt to understand student behavior, but rather view it within moralistic terms. Student misbehavior is perceived as a personal affront, and relationships with pupils are maintained on an impersonal basis. Both pessimism and watchful mistrust permeate the school atmosphere created by the custodial viewpoint. Teachers possessing a custodial ideology view the school as an autocratic organization with rigidly maintained distinctions between the status of teachers and that of students. In such a setting both power and

communication flow unilaterally and downward, and students are expected to accept the decisions of teachers without question. Both teachers and students feel responsible for their actions only to the extent that orders are carried out to the letter. In brief, rigid control of students is the central concern. The custodial school, with its patent emphasis on subordination of students and dominance of teachers, is a typical social structure found in many schools (Deibert and Hoy, 1977).

The school as an educational community in which students learn through cooperative interaction and experience serves as the prototype of the humanistic ideology. Such an orientation is used in the socio-psychological sense suggested by Fromm (1948), i.e., it stresses the importance of the individuality of each student and the creation of an atmosphere to meet the wide range of student needs. Both students' learning and behavior are looked upon in sociological and psychological terms, as opposed to moralistic terms. Learning is perceived as an engagement in worthwhile activities rather than the passive absorption of facts. The withdrawn student is seen as a problem equal to that of the overactive, troublesome one. The humanistic teacher is optimistic that, through close personal relationships with pupils and the positive aspects of friendship and respect, student self-discipline will be substituted for strict teacher control. Teachers holding a humanistic ideology tend to desire a democratic classroom atmosphere with its attendant flexibility in status and rules, open channels of two-way communication, sensitivity to others, and increased student self-determination. Both teachers and students alike are willing to act upon their own volition and to accept responsibility for their actions. A humanistic pupil control orientation is positively associated with all that is desired in a "healthy" organization (Foley and Brooks, 1978), and the key to such an ideology is the teacher (Lunenburg and O'Reilly, 1974).

Willower, Eidell, and Hoy (1967) report that the primary method used in establishing the construct validity of the PCI Form, i.e., the known groups technique, was based upon judgments by principals regarding the pupil control orientation of some of their teachers. Elementary and secondary school teachers judged to be most custodial in their pupil control ideology by their principals had significantly higher PCI Form scores than a similar number of teachers judged by their principals to be most humanistic in their

pupil control orientation. Similar statistically significant results were found by these researchers through a cross-validation analysis using the very same procedures with similar types of samples.

Further evidence of construct validity was established by a comparison of PCI Form scores of personnel from one elementary school and one secondary school known by reputation to be humanistic with PCI Form scores of personnel from other schools at the same grade levels. Willower, Eidell, and Hoy (1967) found that the personnel within the humanistic schools tended to be more humanistic in their pupil control ideology than personnel in the other schools. While no statistical analysis was made in this instance, these differences were in the expected direction. It was concluded that the PCI Form was a relatively valid measure of educators' orientations toward pupil control.

Willower, Eidell, and Hoy (1967) also report split-half reliability coefficients, corrected by the Spearman-Brown formula, for the PCI Form of .95 (N=170) and .91 (N=55). Both samples involved a combination of elementary and secondary school faculty members. It was concluded that the PCI Form was a relatively reliable measure of educators' pupil control ideology.

Concerning previous studies with preservice teachers regarding the PCI Form's test reliability, Halpin, Goldenberg, and Halpin (1974) computed a stability coefficient of .86 for prospective teachers covering a seven-day interval of time. Following a comprehensive review of primarily periodical literature, this study was the only investigation found that reported a test-retest reliability coefficient. Harty, Andersen, and Enochs (1984) calculated alpha coefficients of .71 and .76 for samples of preservice elementary teachers. Graham, Halpin, Harris, and Benson (1985) found an alpha coefficient of .90 for a sample of undergraduate and graduate education students. Woolfolk and Hoy (1990) computed an alpha coefficient of .72 with a sample of prospective teachers. Finally, Enochs, Scharmann, and Riggs (1995) reported a Cronbach's alpha coefficient of .75 utilizing a sample of preservice elementary teachers.

Regarding past research with inservice teachers concerning the test reliability of the PCI Form, Bruan and Cook (1984) reported an internal consistency coefficient of .91 for a sample of elementary

school teachers. Harris, Halpin, and Halpin (1985) found an alpha coefficient of .89 for a sample of teachers. Finally, Kottkamp and Mulhern (1987) computed an alpha reliability of .77 with a sample of high school teachers and based upon school mean scores.

A cursory examination of the reported test reliability scores for the PCI Form shows that such scores appear to run considerably lower for preservice teachers (Mean=.78) when compared to inservice teachers (Mean=.89). As Woolfolk and Hoy (1990) suggest, lower test reliability scores on the PCI Form for prospective teachers appear to be understandable in light of the fact that these subjects probably have not had extensive teaching experiences. This situation would thus limit their individual and collective exposure to pupils. Furthermore, higher test reliability scores on the PCI Form for inservice teachers seems logical when one considers that they were essentially the population on which this instrument was originally developed. This point is underscored in part by the fact that in most studies the PCI Form has been generally administered to classroom teachers (Graham, Benson, and Henry, 1985). In the authors' review of predominantly periodical literature covering 1963-1995, 75% (46 out of 61) of the studies with the PCI Form dealt with inservice teachers. Finally, lower test reliability scores on the PCI Form for preservice teachers may be due to the fact that they may represent a more homogeneous and restricted population than inservice teachers. As Anastasi (1988) points out, reliability coefficients are affected by the variability of the group in which they are computed. As the variability of the sample decreases, so does the reliability coefficient found with that particular sample.

In studies examining pupil control ideology and pluralistic ignorance, Packard and Willower (1972) computed split-half reliability coefficients for the PCI Form, corrected by the Guttman formula, ranging from .85 to .91. These estimates of internal consistency were found with a sample of elementary and secondary school teachers, counselors, and principals and included PCI Forms responded to from the perspective of both personal orientations toward pupil control and the perceived ideologies toward such control on the part of other position incumbents within the school setting. In a similar type of investigation, Vitagliano and Licata (1987) reported alpha reliability coefficients ranging from .69 to .89, with a mean coefficient of .79, for the PCI Form filled out on both

oneself and others. This study involved both elementary and secondary school hearing and nonhearing teachers working within a residential school for the deaf.

The preceeding discussion concerning the validity and particularly the reliability of the PCI Form supports the adequacy of this instrument for use in research with preservice and inservice educators. Regarding test reliability, the reported scores generally fall within the range of "acceptable values" for this type of "attitudinal" measure that have been delineated by Helmstadter (1964), Sprinthall (1994), and Crowl (1996). This is especially true in the case of inservice teachers.

It is important to be mindful of the fact that the PCI Form is a measure of control ideology as opposed to control behavior, although it seems reasonable to expect that ideology will, to some degree, be reflected in behavior (Lunenburg and Schmidt, 1989) and that one function of ideology is that of structuring behavior, i.e., providing an internal guide to action (Helsel, 1971). In fact, there is some empirical evidence that educators' pupil control ideology and their pupil control behavior are positively and significantly related to each other (Helsel and Willower, 1974). Nevertheless, the majority of studies dealing with pupil control have traditionally focused upon ideology rather than behavior (Lunenburg and Schmidt, 1989; Willower, 1975).

Willower (1975) points out that no attempt has been made to standardize the PCI Form since this measure is commonly viewed as a research rather than a diagnostic tool. Furthermore, the PCI Form is seen as being both time and place bound; socioeconomic changes over time are likely to be reflected in changes in the distribution of PCI scores (Graham, Halpin, Harris, and Benson, 1985). In terms of possible refinements of the PCI Form, Willower (1975) notes that societal changes have tended toward more humanistic orientations which have been reflected in both preservice and inservice teacher training programs. Thus some items found on the PCI Form, e.g., "Directing sarcastic remarks toward a defiant pupil is a good disciplinary technique," may be so at odds with current educational thought that a demand effect occurs. Teachers may hesitate to concur with such a statement because of the prevalent values of their milieu, even if their pupil control ideology tends to be custodial. Thus

updating this instrument through the development and field testing of new items is recommended (Graham, Halpin, Harris, and Benson, 1985).

Furthermore, 18 of the 20 items on the PCI Form are worded from the custodial point of view. A more even mix of items worded from both the humanistic and custodial perspectives could be beneficial in avoiding response bias. Graham, Halpin, Harris, and Benson (1985) suggest that this could be accomplished through the construction of new items. Finally, these same authors recommend for possible consideration in future investigations the use of a 10-item, one factor PCI Form consisting of items 9, 10, 11, 12, 13, 14, 16, 17, 19, and 20. They report an alpha coefficient of .94 as an estimate of test reliability for this reduced scale on a sample of undergraduate and graduate students in education. Graham, Benson, and Henry (1985) found an alpha coefficient of .71 for this shortened version of the PCI Form with a sample of teachers at the primary and intermediate levels. They argued that the differences in these two estimates of internal consistency for the reduced form are probably attributable to the fact that the sample in their study was comparatively smaller and more homogeneous in nature.

Recommendations

In light of the findings and discussion contained within this investigation, the following five recommendations are made, in addition to those already mentioned, regarding the topic at hand:

1. In future studies, especially with inservice educators, more reporting on the test reliability of the PCI Form with the samples involved is suggested. This would be especially informative with research of a cross-cultural/international nature.
2. It is suggested that continued emphasis be placed upon using Cronbach's alpha technique, as opposed to either the test-retest or the split-half techniques, for computing the test reliability of the PCI Form since this method is commonly regarded as being especially appropriate and acceptable with unidimensional psychological measures, such as the one in question (Anastasi, 1988; Friedenberg, 1995; McMillan, 1992; Vockell and Asher, 1995). However, this particular recommendation tends to run

counter to the argument advanced by Conrad and Maul (1981) that one can have the most confidence in a test's reliability if research has been conducted with more than one of the procedures for estimating reliability.

3. Perhaps in the future researchers who study the topic of pluralistic ignorance could report the specific test reliabilities of the PCI Form for the various position incumbents involved, rather than just the range of scores. It would be interesting to know whether the test reliability scores of the PCI Form vary depending upon the organizational positions examined.

4. In the future, more reporting of test reliability scores with other than regular education preservice and inservice teachers, e.g., varying exceptionalities prospective and inservice teachers, would add further to our understanding of the internal consistency of the PCI Form with such populations.

5. In light of the generally lower test reliability scores on the PCI Form for preservice teachers, future test development efforts may want to concentrate upon the construction of a PCI Form specifically for prospective teachers. Such an instrument could be based upon the premise that preservice teachers are generally limited in terms of the amount of exposure they have had in both teaching and managing students.

Conclusion

It is the opinion of the present authors that the concept of pupil control ideology, and those who have devoted themselves to studying it, have made a significant contribution to how one can perceive the nature of schools, and in particular their culture or climate and the social, psychological, and political dynamics operating within them. It is within the context of a rich theoretical and empirical tradition associated with pupil control orientation that this investigation was conducted. It is sincerely hoped by the present writers that this undertaking, though small in stature and narrow in focus, has made its own special contribution to present and future efforts at developing enhanced understanding about the concept of pupil control ideology and its measurement.

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